



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,428	12/04/2003	Graeme G. Schreiber	GB920020044US1	6836
53493	7590	09/13/2007		
LENOVO (US) IP Law 1009 Think Place Building One, 4th Floor 4B6 Morrisville, NC 27560			EXAMINER ABEDIN, SHANTO	
			ART UNIT 2136	PAPER NUMBER
			MAIL DATE 09/13/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/727,428	Applicant(s) SCHREIBER ET AL.	
	Examiner Shanto M Z Abedin	Art Unit 2136	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the communication filed on 09/04/2007.
2. The applicant's arguments submitted after FINAL office action are considered, and found persuasive, therefore, finality of the previous office action is withdrawn. This action is made NON- FINAL.
3. Claim 1-6 are currently presented for the examination.
4. Claim 1-6 have been rejected.

Response to Arguments

5. Regarding the previous 35 USC §102 (e) rejections on claims 1-6, the applicant primarily argues that the prior art Kermani does not teach or suggest (a) wherein each relative inter-keystroke interval is calculated as the absolute inter-keystroke interval divided by an anchor value, the anchor value selected from a first absolute inter-keystroke interval and an average of the absolute inter-keystroke intervals; and (b) wherein said predetermined tolerance of the relative inter-keystroke interval is in the range of plus twenty-five percent to minus twenty-five percent.

The applicant's above arguments are fully considered.

In response to arguments (a), they are found persuasive, however, these arguments are moot in view of new grounds of rejection (please see the office action below).

In response to arguments (b), they are found not persuasive since Kermani does suggest enablement of wherein said predetermined tolerance of the relative inter-keystroke

Art Unit: 2136

interval is in the range of plus twenty-five percent to minus twenty-five percent (Col 7, starts at line 26; please see below for detail).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-6 are rejected under 35 USC 103 (a) as being unpatentable over Kermani (US 6895514 B1) in view of Serpa (US 6954862 B2).

Regarding claim 1, Kermani discloses a method of authenticating a user comprising the steps of:

providing, by the user, a unique identifier, the unique identifier comprising both a sequence of keystrokes and the inter-keystroke intervals associated with provision of those keystrokes (Col 2; starts at line 29; Col 3, lines 20-40; ; user provided key stroke sequence and timing model).

comparing the unique identifier provided by the user with a reference unique identifier (Col 4, starts at line 34) by:

comparing the absolute inter-keystroke intervals of the unique identifier with the absolute inter-keystroke intervals of the reference unique identifier and returning a true

Art Unit: 2136

indication if the absolute inter-keystroke interval of the unique identifier is within a predetermined tolerance of the absolute inter-keystroke interval of the reference identifier (Col 3 line 20 to Col 6, line 14; comparing/ computing key stroke sequence, intervals/ lapses/ distances);

comparing the relative inter-keystroke intervals of the unique identifier with the relative inter-keystroke intervals of the reference unique identifier and returning a true indication if the relative inter-keystroke interval of the unique identifier is within a predetermined tolerance of the relative inter-keystroke interval of the reference identifier (Col 3, starting at line 40; Col 5, lines 1-30; threshold values) wherein each relative inter-keystroke interval of the reference identifier (Col 5, starts at line 45; Eq. 2; calculating distance of keystrokes using absolute values and mean values of the keystroke intervals; deviation).

authenticating said user if both said absolute comparison step and said relative comparison step return a true indication (Col 3, lines 20-54).

Kermani fails to disclose wherein each relative inter-keystroke interval is calculated as the absolute inter-keystroke interval divided by an anchor value, the anchor value selected from deviation of inter-keystroke interval and an average of the absolute inter-keystroke intervals.

However, Serpa suggests enablement of wherein each relative inter-keystroke interval is calculated as the absolute inter-keystroke interval divided by an anchor value, the anchor value selected from deviation of inter-keystroke interval and an average of the absolute inter-

keystroke intervals (Fig 1, Col 15, starting at line 54; Claim 1; calculating and comparing certain pace, rhythm, or tempo; the examiner interprets such certain pace, rhythm, or tempo as relative inter-keystroke interval, and such pace, rhythm, or tempo can be calculated as the absolute inter-keystroke interval divided by an anchor value, the anchor value selected from deviation of inter-keystroke interval and an average of the absolute inter-keystroke intervals).

Serpa and Kermani are analogous art because they are from the same field of endeavor of authentication system. At the time of invention it would have been obvious to a person of ordinary skill in the art to combine the teaching of Serpa with Kermani to design a method further including wherein each relative inter-keystroke interval is calculated as the absolute inter-keystroke interval divided by an anchor value, the anchor value selected from deviation of inter-keystroke interval and an average of the absolute inter-keystroke intervals in order to provide an alternative way to calculate the keystroke pace, rhythm, or tempo.

Regarding claim 2, it is rejected applying as above rejecting claim 1, furthermore, Serpa discloses a method, wherein said relative inter-keystroke intervals are the ratio of the inter-keystroke intervals and the inter-keystroke interval between entry of the first of said sequence of keystrokes and the second of said sequence of keystrokes (Fig 1, Col 15, starting at line 54; Claim 1; calculating and comparing certain pace, rhythm, or tempo; the examiner interprets such certain pace, rhythm, or tempo as relative inter-keystroke interval, and such certain pace, rhythm, or tempo can be calculated as the ratio of the inter-keystroke intervals

and the inter-keystroke interval between entry of the first of said sequence of keystrokes and the second of said sequence of keystrokes).

Regarding claim 3, Kermani discloses a method further comprising the step of entry by the user of the reference unique identifier and wherein said predetermined tolerance is determined during said step of entry by the user of the reference unique identifier (Col 2, lines 20-50; Col 3, starting at line 40; Col 5, lines 1-30; threshold values).

Regarding claim 4, Kermani discloses a method wherein said predetermined tolerance is explicitly set by the user (Col 3, line 20 to Col 5, lines 1-30; decision circuit at user machine).

Regarding claim 5, Kermani discloses a computer program comprising computer program code means adapted to perform the steps of any one of claim 1 to claim 4 (Col 3 line 20 to Col 4, line s 25).

Regarding claim 6, Kermani discloses the method wherein said predetermined tolerance of the relative inter-keystroke interval is in the range of plus twenty-five percent to minus twenty-five percent (Col 5, starts at line 9; Col 7, starts at line 26; Kermani teaches accepting up to 20% mismatch or 80% match as threshold; Kermani suggests enablement of tolerance/ mismatch of twenty five percent).

Conclusion

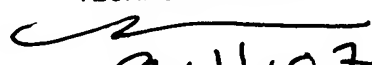
7. A shortened statutory period for response to this action is set to expire in 3 (Three) months and 0 (Zero) days from the mailing date of this letter. Failure to respond within the period for response will result in ABANDONMENT of the application (see 35 U.S.C 133, M.P.E.P 710.02(b)).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shanto M Z Abedin whose telephone number is 571-272-3551. The examiner can normally be reached on M-F from 9:00 AM to 5:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Moazzami Nasser, can be reached on 571-272-4195. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Shanto M Z Abedin
Examiner, AU 2136

NASSER MOAZZAMI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100


9/11/07